**Precalculus**

**Notes 2.3**

**Short & Long Division of Polynomials & Synthetic Division**

1.  2.  3. 

4.  5.  6. 

7. 525  25 8. (9b2 + 9b – 10)  (3b – 2)

9. (5m2 – 34m – 7)(m – 7) -1 10. (4x + x2 – 25)  (x + 7)

11. (6x3 + 5x2 + 10)  (2x + 3) 12. 

1. One factor of x3 – 6x2 + 11x – 12 is (x – 4). What is the other factor?

Divide by synthetic division.

Ex. 1 2x3 – 9x2 + 14x – 8 by x – 3

Ex. 2 2x3 + 9x2 + x – 12 by x + 4

Ex. 3 3x4 – 2x2 – 5x + 4 by x – 2

Ex. 4 x3 – 8x2 + 17x – 10 by x – 5

Ex. 5 x4 + 2x3 + x – 3 by x – 1